

North Carolina
DEPARTMENT OF TRANSPORTATION

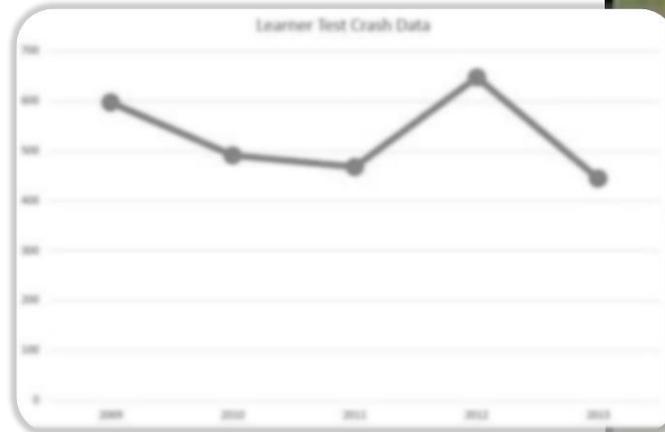


Moped Crash Analysis and Enforcement Recommendations

Kelly J. Thomas, Commissioner
Kevin Lacy, State Traffic Engineer
January 27, 2015

Presentation Purpose

- Examine key trends from moped/scooter crashes;
- Identify implementation concerns;
- Outline policy change recommendations for safe operation enforcement

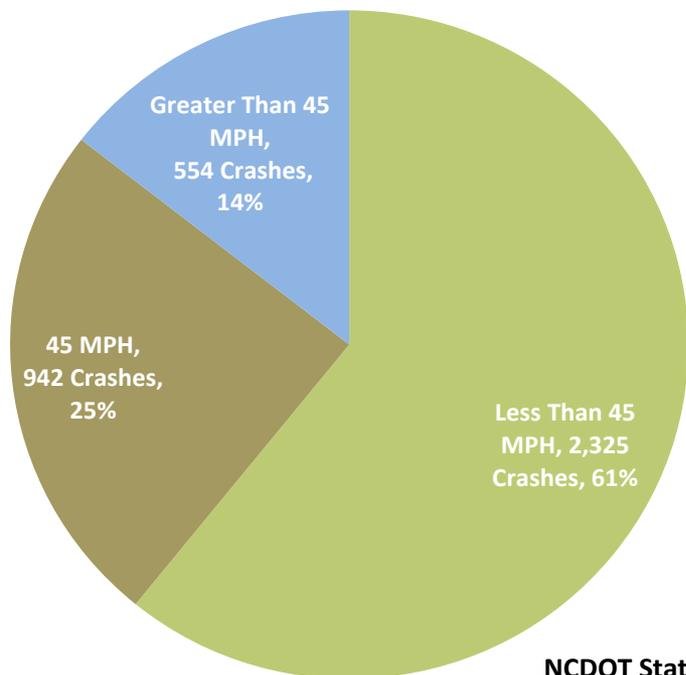


I. Examining Moped Crash Data

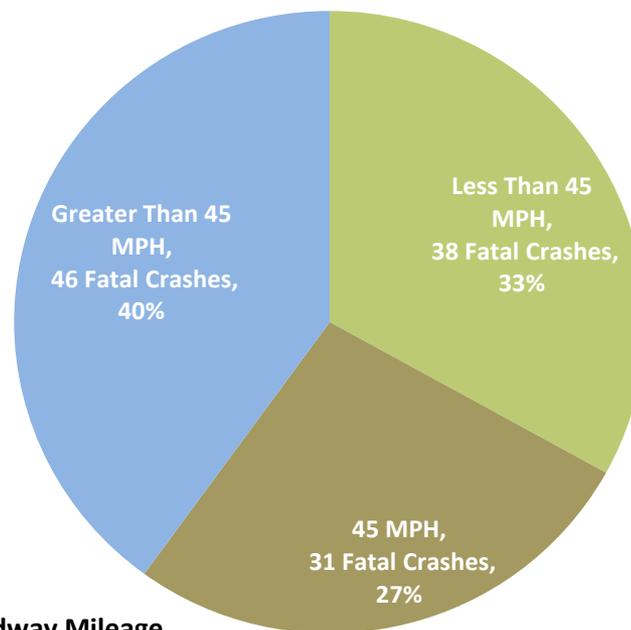
Data Limitations

- High Levels of Under-reporting
- Crashes involving a single moped are not currently reported or captured in data systems
- Data reporting is sporadic and inconsistent
 - ✓ Dramatic year to year changes in reporting in some counties
- Local policies may be impacting reporting of data
- General lack of clarity in how to report or classify these events

Reportable Moped/Motor Scooter Crashes by Authorized Speed Limit (01/01/2009 – 12/31/2013)



Reportable Moped/Motor Scooter Fatal Crashes by Authorized Speed Limit (01/01/2009 – 12/31/2013)

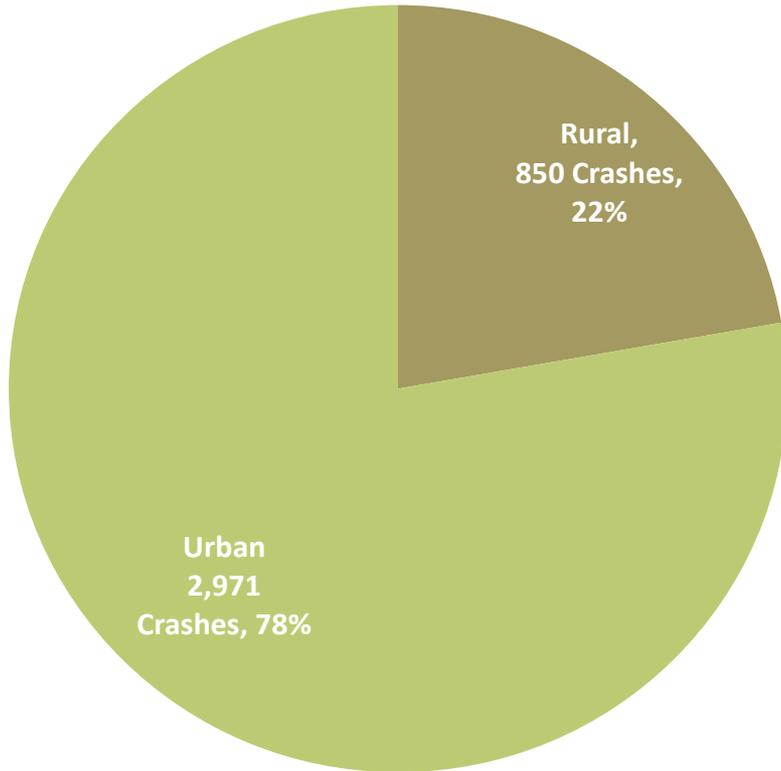


NCDOT State Maintained Roadway Mileage by Speed Limit

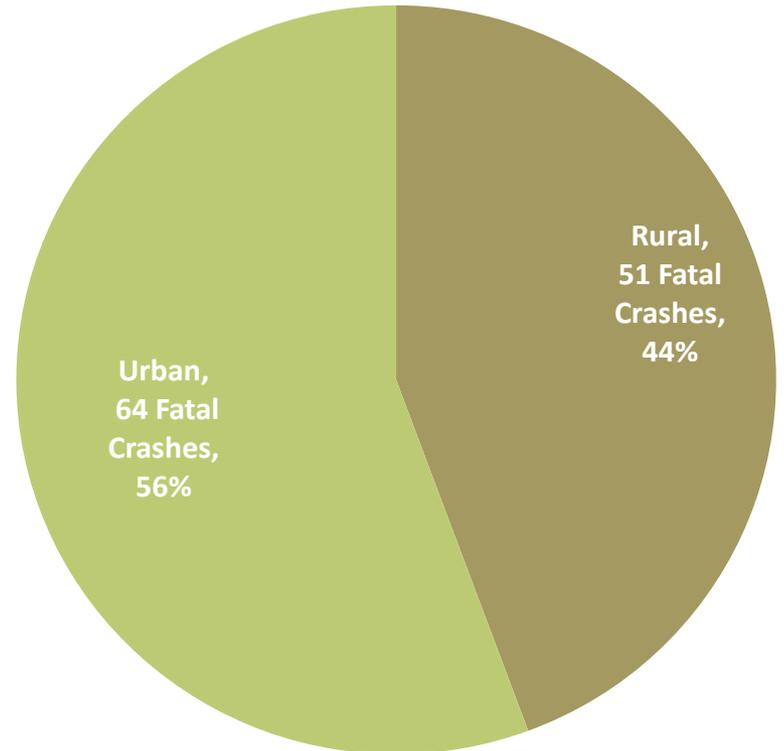
| Speed Limit (MPH) | Mileage |
|---------------------------|---------------|
| Less Than 45 MPH | 12,410 |
| 45 MPH | 9,424 |
| Greater Than 45 MPH | 57,822 |
| Total NCDOT System | 79,656 |

*Based on data collected in Dec. 2014

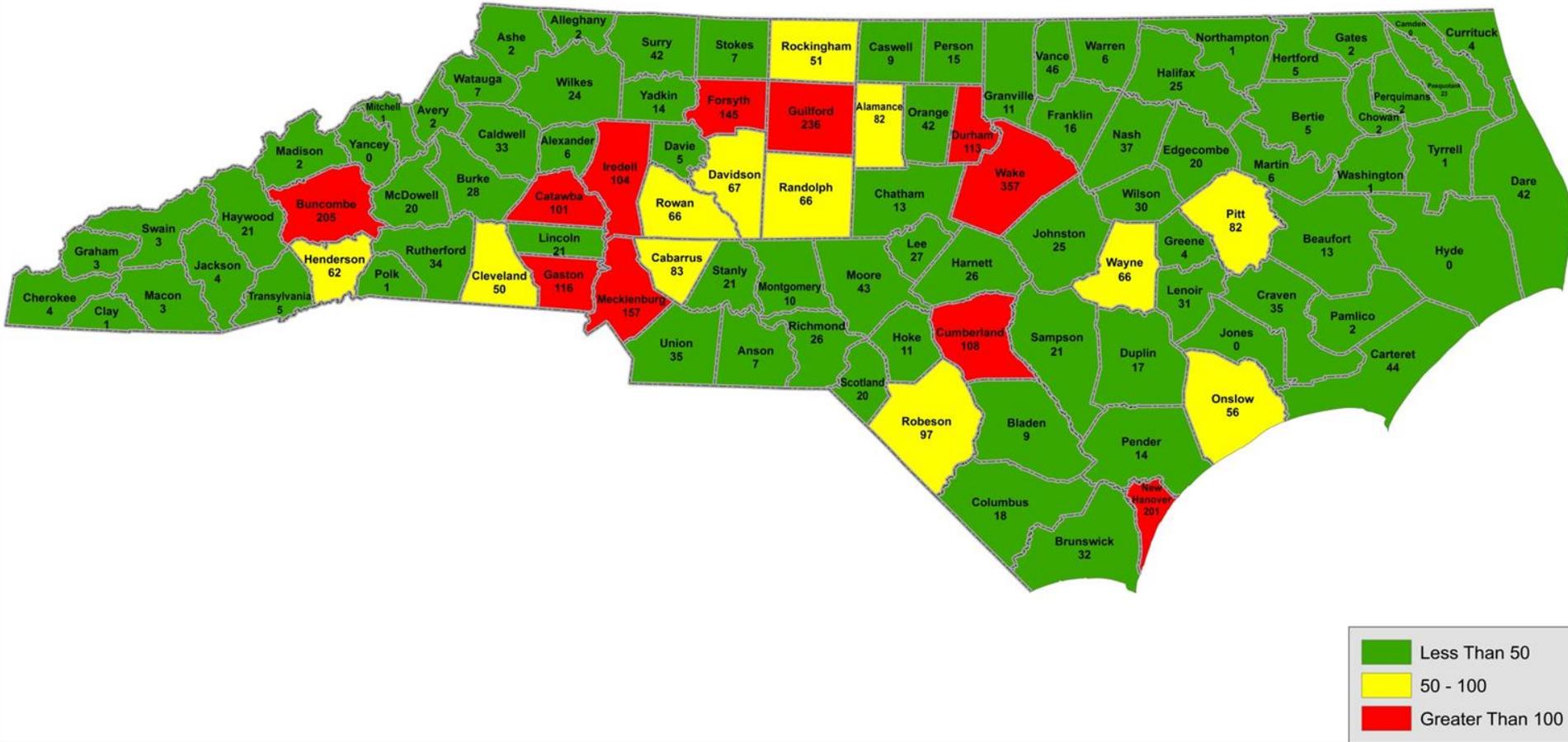
Locality of Reportable Moped/Motor Scooter Crashes (01/01/2009 – 12/31/2013)



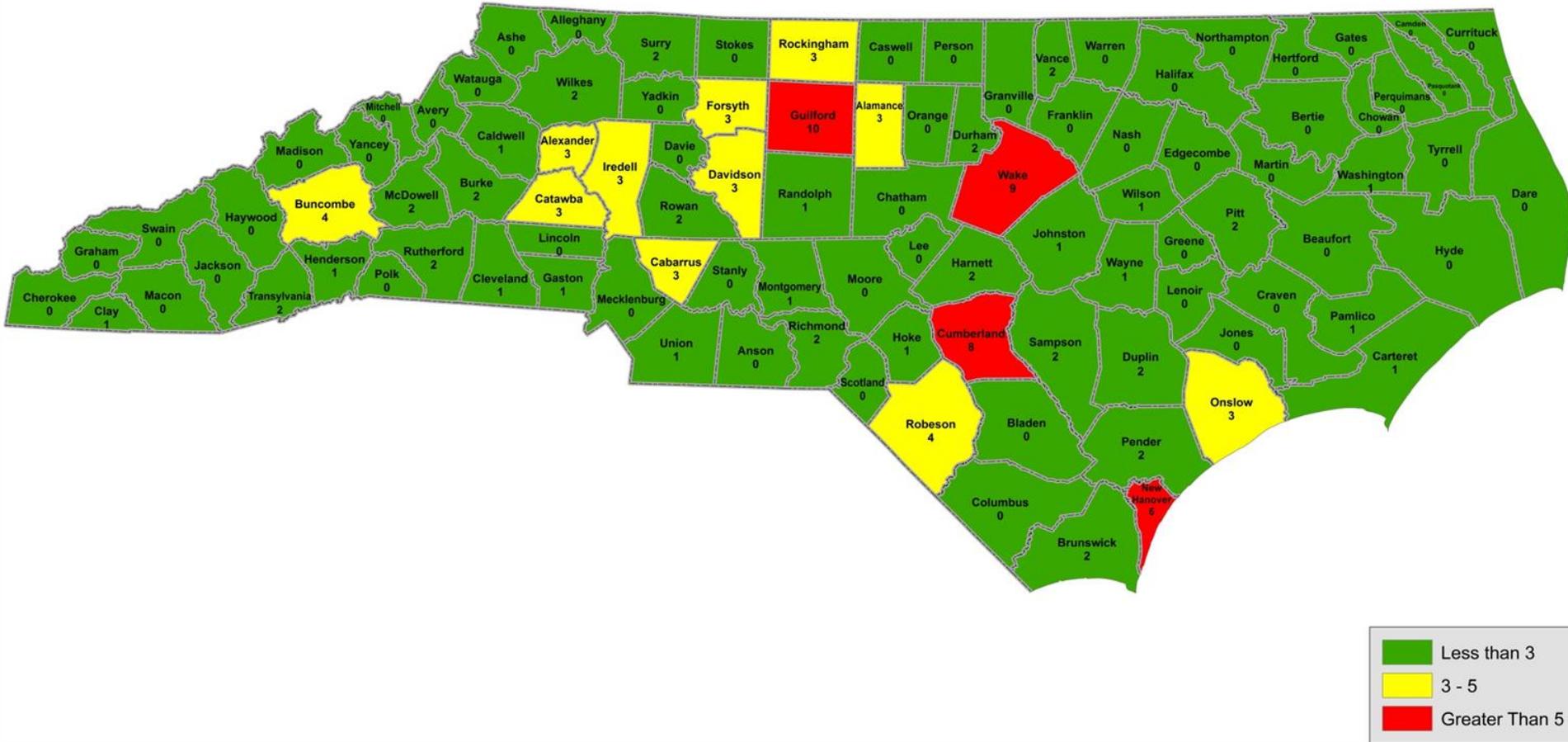
Locality of Fatal Scooter and Moped Crashes (01/01/2009 – 12/31/2013)



Total Reportable Moped / Motor Scooter Crashes (01/01/2009 - 12/31/2013)



Fatal Moped / Motor Scooter Crashes (01/01/2009 - 12/31/2013)



Top 10 Counties in Which Reportable Scooter and Moped Crashes Occurred

(Reporting Period of January 1, 2009 to December 31, 2013)

| County | Fatal Crashes | Injury Crashes | PDO Crashes | Grand Total |
|-------------|---------------|----------------|-------------|-------------|
| WAKE | 9 | 323 | 25 | 357 |
| GUILFORD | 10 | 217 | 9 | 236 |
| BUNCOMBE | 4 | 187 | 14 | 205 |
| NEW HANOVER | 6 | 187 | 8 | 201 |
| MECKLENBURG | 0 | 150 | 7 | 157 |
| FORSYTH | 3 | 130 | 12 | 145 |
| GASTON | 1 | 106 | 9 | 116 |
| DURHAM | 2 | 99 | 12 | 113 |
| CUMBERLAND | 8 | 91 | 9 | 108 |
| IREDELL | 3 | 98 | 3 | 104 |

46% of the reportable scooter and moped crashes occurred in the Top 10 Counties

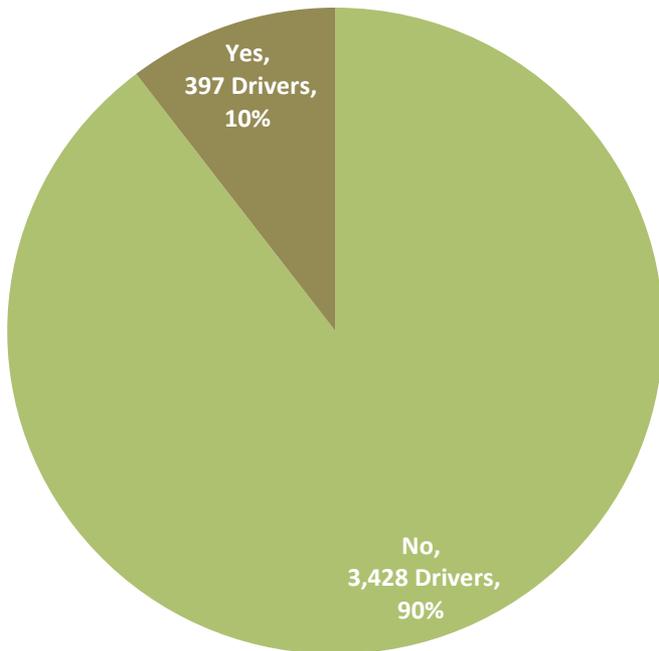
Top 10 Cities in Which Reportable Scooter and Moped Crashes Occurred

(Reporting Period of January 1, 2009 to December 31, 2013)

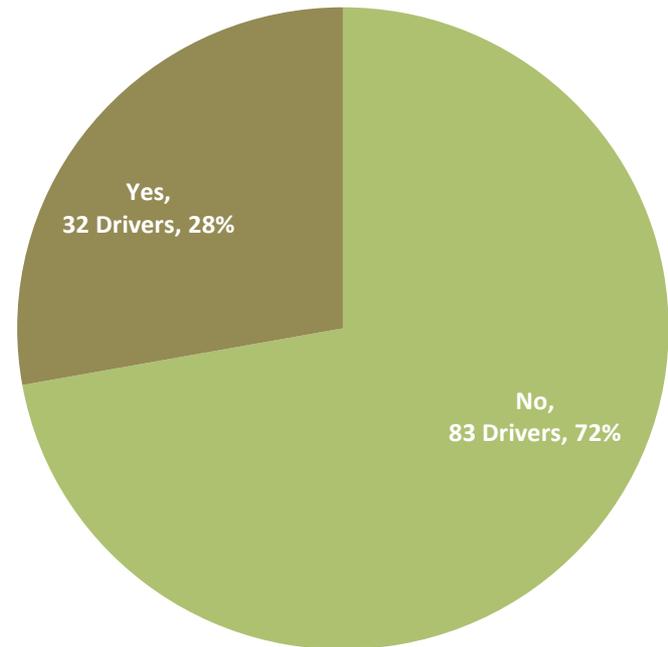
| Cities | Fatal Crashes | Injury Crashes | PDO Crashes | Grand Total |
|---------------|---------------|----------------|-------------|-------------|
| RALEIGH | 5 | 246 | 20 | 271 |
| ASHEVILLE | 3 | 156 | 13 | 172 |
| WILMINGTON | 2 | 135 | 6 | 143 |
| GREENSBORO | 8 | 131 | 3 | 142 |
| CHARLOTTE | 0 | 121 | 4 | 125 |
| WINSTON SALEM | 2 | 106 | 10 | 118 |
| DURHAM | 2 | 96 | 11 | 109 |
| FAYETTEVILLE | 5 | 67 | 5 | 77 |
| HIGH POINT | 2 | 67 | 4 | 73 |
| GASTONIA | 0 | 65 | 4 | 69 |

34% of the reportable scooter and moped crashes occurred in the Top 10 Cities

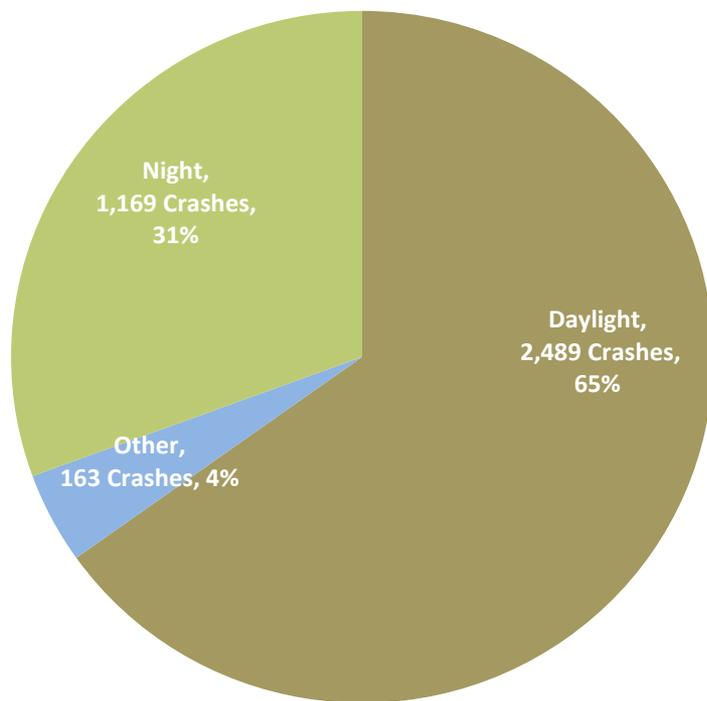
**Number of Moped/Motor Scooter Drivers
Involved in Reportable Crashes
in which Alcohol was Suspected
(01/01/2009- 12/31/2013)**



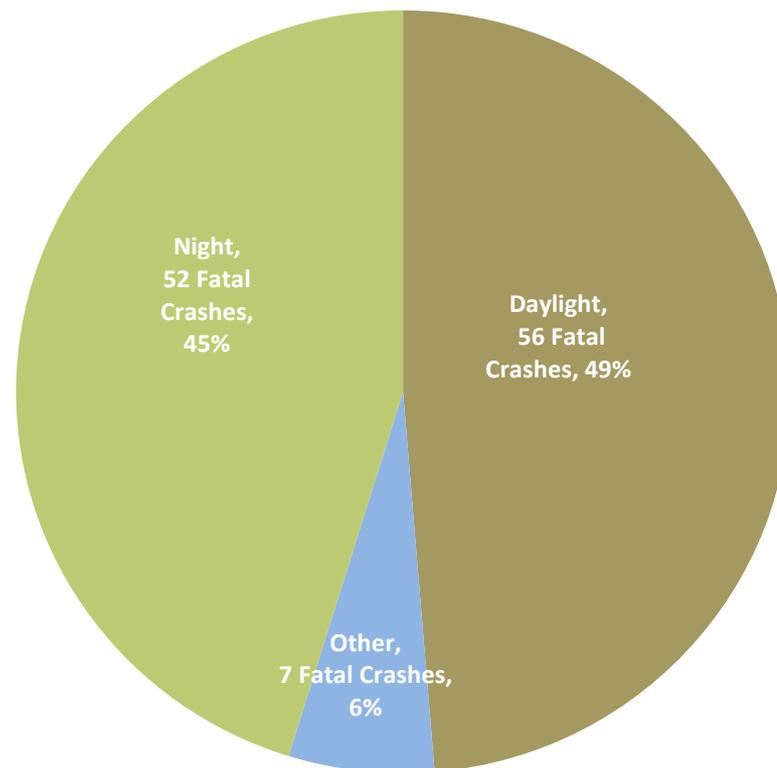
**Number of Moped/Motor Scooter Drivers
Involved in Fatal Crashes
in which Alcohol was Suspected
(01/01/2009 – 12/31/2013)**



**Reportable Moped/Motor Scooter Crashes
By Light Conditions
(01/01/2009 – 12/31/2013)**

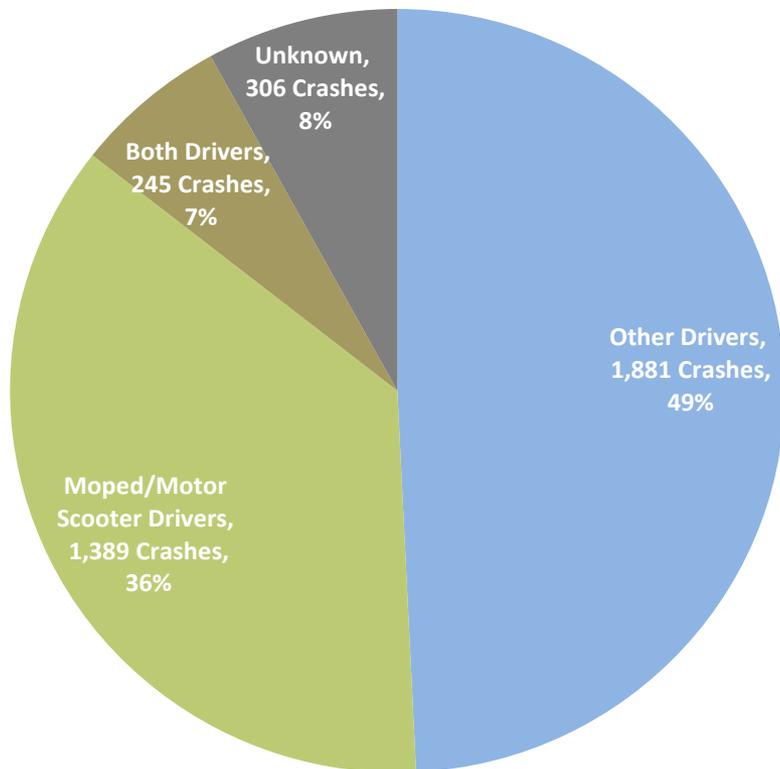


**Fatal Moped/Motor Scooter Crashes
By Light Conditions
(01/01/2009 – 12/31/2013)**

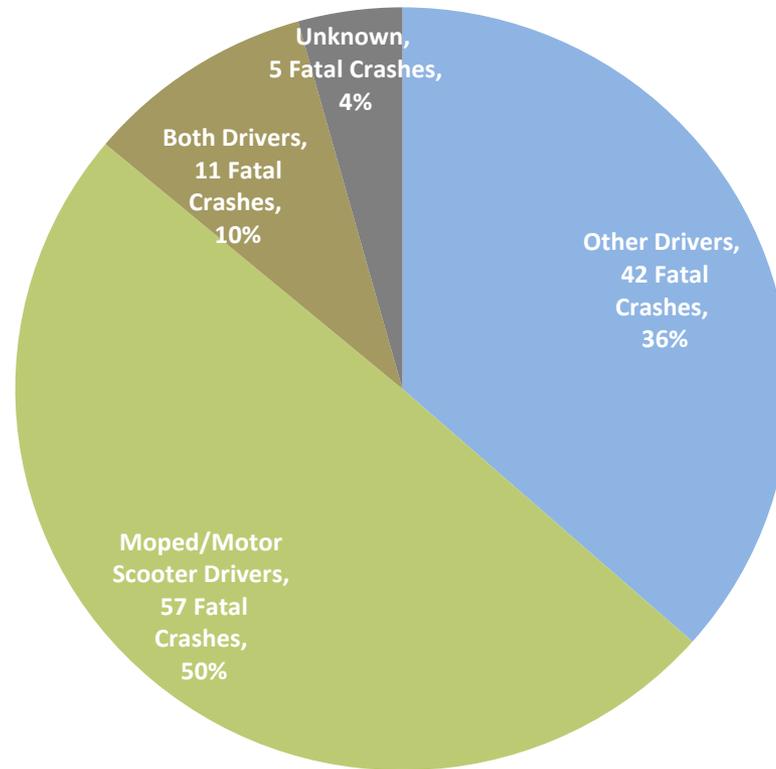


- 1,606 (42%) of the Reportable Moped/Motor Scooter Crashes occurred between the hours of 2:00pm and 5:59pm
- 40 (35%) of the Fatal Moped/Motor Scooter Crashes occurred between the same hours

**Reportable Moped/Motor Scooter Crashes
Drivers Determined to be at Fault
(01/01/2009 – 12/31/2013)**

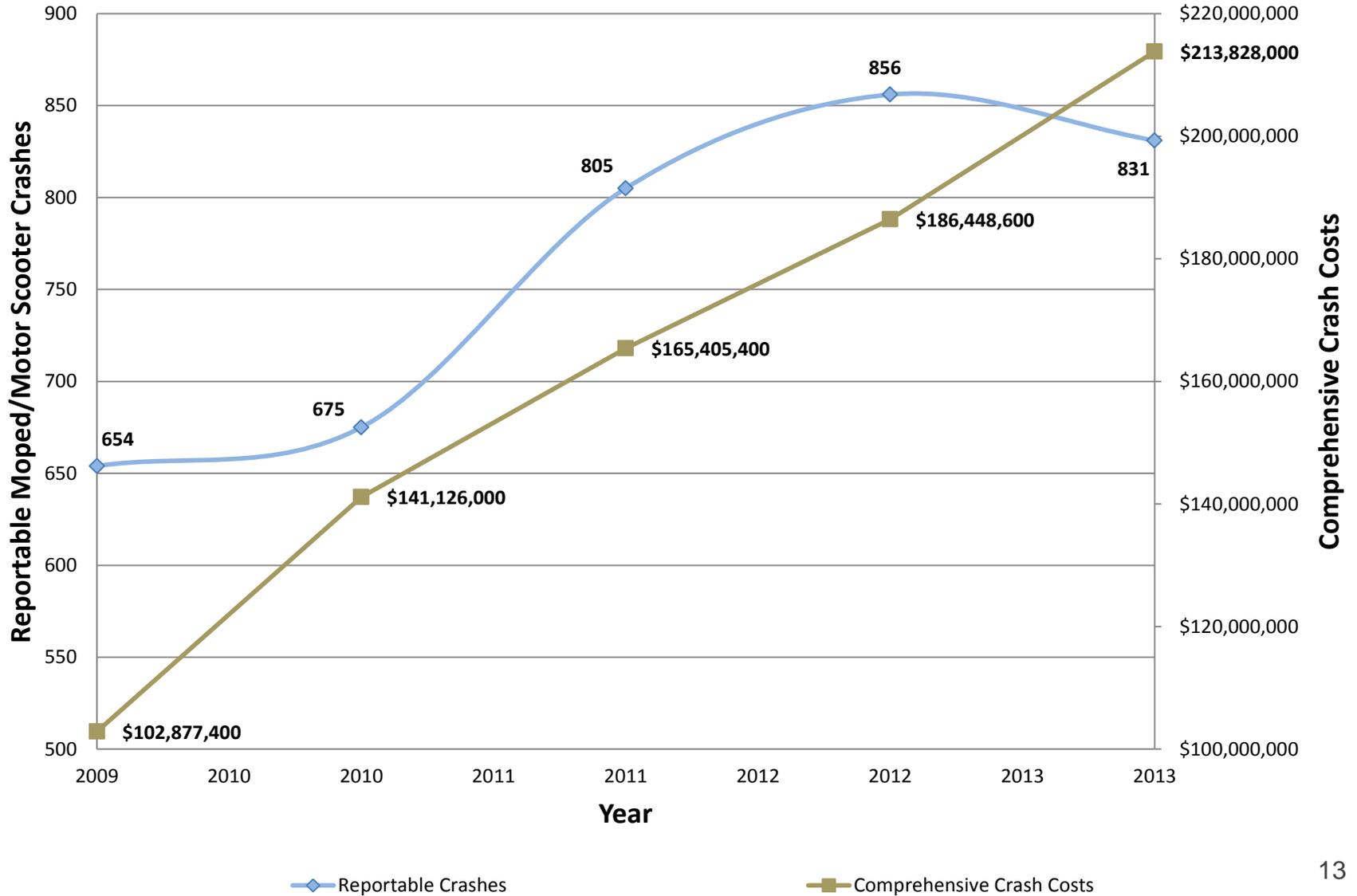


**Fatal Moped/Motor Scooter Crashes
Drivers Determined to be at Fault
(01/01/2009 – 12/31/2013)**



- A review was done of the drivers' contributing circumstances as indicated on crash reports to determine which drivers were at fault.

Reportable Moped/Motor Scooter Crashes and Comprehensive Crash Costs (01/01/2009 – 12/31/2013)





II. Implementation Considerations ...and Policy Recommendations



Operator/Driver

Research

- 34 of 35 states surveyed prevent individuals from operating a moped if their driver's license has been revoked, suspended or denied due to a DWI/DUI.
- 32 of 34 states surveyed prevent individuals from operating a moped if their driver's license has been revoked, suspended or denied due to a medical reason.
- 32 of 35 states surveyed require a moped operator to have a valid driver's license.
- 7 of 31 states surveyed require a safety endorsement to operate a moped.

Recommendations

- Operators with revoked, suspended or denied license due to a DWI/DUI or for medical reasons shall not operate a moped.
- Moped operators are required to have a driver's license or DMV issued ID card.

Registration/Titling

Research

- 32 states surveyed for registration/titling of mopeds:
 - ✓ 50% Do Not Title
 - ✓ 28% Register Only
 - ✓ 25% Do Neither

Recommendations

- § 20-52. Application for registration
- § 20-57. Division should issue registration card **only** when the following criteria are met:
 - ✓ Affidavit of Facts
 - ✓ DMV issued DL or ID card
 - ✓ Proof of Liability Insurance – (if required)
- DMV recommends titling mopeds if insured.

Safety and Inspections

Research

- 19 of 33 states surveyed require a moped operator to carry liability insurance.
- 21 of 32 states surveyed regulate the public roadways on which a moped can travel based upon posted speed limits.
- 5 of 31 states surveyed require emission or safety testing on mopeds.

Recommendations

- Operators must be required to carry liability insurance.
- Mopeds shall not be operated on public roadways with posted speed limits of 45 mph or greater.
- Mopeds operated on public highways shall be limited to those manufactured in compliance with 49 USC 30112. Per this statute, mopeds shall comply with all applicable Federal Motor Vehicle Safety Standards in effect on their date of manufacture.

Implementation Deadline

July 2015 implementation date limits sufficient time to educate stakeholders

- January 1, 2016 is recommended implementation date

- Stakeholders requiring information and education:
 - ✓ General Public - Information & Training
 - ✓ Law Enforcement Agencies - Training
 - ✓ Media Outlets - Information



III. Implementation Tools

Certificate of Origin

CERTIFICATE OF ORIGIN FOR A VEHICLE

TAIZHOU CITY KAITONG MOTORCYCLE MANUFACTURE CO., LTD

| | | | |
|----------------------------|-------------|-----------------|-----------------|
| DATE | INVOICE NO. | | |
| 8/15/2011 | 2122239 | | |
| VEHICLE IDENTIFICATION NO. | YEAR | MAKE | |
| LYDTCKPF0B1500072 | 2011 | KAIT | |
| BODY TYPE | | SHIPPING WEIGHT | |
| MOTORCYCLE | | 308 LBS | |
| H.P. (S.A.E.) | G.V.W.R. | NO. CYLS. | SERIES OR MODEL |
| 6.8 HP | 508 LBS | 1 | MD150T-8 |
| 150 CC | | | |

This vehicle and equipment conforms to all applicable federal motor vehicle safety standards and environmental protection agency requirements in accordance with the national highway traffic safety administration.

I, the undersigned authorized representative of the company, firm or corporation named below hereby certify that the new vehicle described above is the property of the said company, firm or corporation and is transferred on the above date and under the invoice Number indicated to the following distributor or dealer.

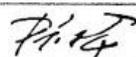
NAME OF DISTRIBUTOR, DEALER, ETC.

SUPERIOR POWERSPORTS
17435 EAST GALE AVENUE
CITY OF INDUSTRY, CA 91748

It is further certified that this was the first transfer of such new vehicle in ordinary trade and commerce.

TAIZHOU CITY KAITONG MOTORCYCLE MANUFACTURE CO., LTD

NB 1002182

BY:  (SIGNATURE OF AUTHORIZED REPRESENTATIVE) (AGENT)

CITY-STATE

CERTIFICATE OF ORIGIN FOR A VEHICLE

*FOSHAN CITY FOSTI MOTORCYCLE
MANUFACTURING Co., LTD.*

| | | | |
|----------------------------|-------------|-----------------|-----------------|
| DATE | INVOICE NO. | | |
| 8/16/2013 | 20131941 | | |
| VEHICLE IDENTIFICATION NO. | YEAR | MAKE | |
| LB5TBCKA9DZ000201 | 2013 | PCC | |
| BODY TYPE | | SHIPPING WEIGHT | |
| MC | | 240 LBS | |
| H.P. (S.A.E.) | G.V.W.R. | NO. CYLS. | SERIES OR MODEL |
| 49CC | 484 LBS | 1 | Angel |

THIS VEHICLE CONFIRMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS (FMVSS)

I, the undersigned authorized representative of the company, firm or corporation named below, hereby certify that the new vehicle described above is the property of the said company, firm or corporation and is transferred on the above date and under the Invoice Number indicated to the following distributor or dealer.

NAME OF DISTRIBUTOR, DEALER, ETC.

Unique Motorsports
523 Capital Blvd
Raleigh, NC 27603

It is further certified that this was the first transfer of such new vehicle in ordinary trade and commerce.

PUMA CYCLES CORPORATION

BY:  (SIGNATURE OF AUTHORIZED REPRESENTATIVE) (AGENT)

1550 SOUTH SINCLAIR STREET
ANAHEIM, CALIFORNIA 92806
CITY-STATE

A- 05793

Affidavit of Facts

MVR-222
(Rev. 1/15)

Affidavit of Facts for the Registration of a Moped

The following questions must be answered in detail and this form must be presented for application for the registration of a Moped for which a Manufacturers Certificate of Origin cannot be furnished. Furnish any documents in your possession that will show proof of ownership. (Examples would include Titles, bills of Sales, conditional Sales Contract, Invoices, or Out of State Registrations).

| Year Model | Make | Body Style | Vehicle Identification Number/Serial Number |
|------------|------|------------|---|
| | | | |

List the date you acquired the vehicle and the location.

I, [PRINTED FULL LEGAL NAME], appearing before the undersigned notary and being duly sworn, says and affirms that:

1. I am the true and legal owner of a [MAKE AND MODEL OF VEHICLE IF KNOWN] moped. I acquired the vehicle on or about _____, 20____.
2. The moped bears a VIN or Serial Number: [VIN OR SERIAL NUMBER IF PRESENT].
3. The moped is designed for use on the highways and is in operable condition and is safe to be operated on the public highways.
4. I do not have a title or Manufacturer's Certificate of Origin because (check one):
 - a) _____ Same was not provided to me by the dealer at the time of purchase; or
 - b) _____ Same was not provided to me by the prior owner at the time of purchase; or
 - c) _____ Same was provided to me, but has since been lost or destroyed; or
 - d) _____ Other (explain): _____.
5. What steps, if any, have you taken to contact the seller/previous owner in order to obtain proper ownership documentation? _____.
6. I affirm that my driving privileges are not currently revoked, suspended or cancelled and that I am legally eligible to register this vehicle.
7. I affirm under penalty of perjury and/or punishment pursuant to N.C.G.S. §20-112, that the foregoing information is based upon my personal knowledge and is true and accurate to the best of my knowledge.

Owner's Signature: _____

Date _____ County _____ State _____

I certify that the following person(s) personally appeared before me this day, each acknowledging to me that he or she voluntarily signed the foregoing document for the purpose stated therein and in the capacity indicated.

(Names of Principals(s))

Notary Signature _____

Notary Printed or Typed Name _____

(SEAL) My commission Expires _____

* Mopeds cannot be operated on roads where the speed limit is 45mph or greater.

Moped Plate

